
Supplement I to Recommendations for Reporting the Effectiveness of Programed Instruction Materials: Recommendations concerning Program Manuals

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Supplement I to Recommendations for Reporting the Effectiveness of Programed Instruction Materials¹

Recommendations Concerning Program Manuals

(Revised October 1965)

JOINT COMMITTEE ON PROGRAMMED INSTRUCTION AND TEACHING MACHINES²

It is assumed that most publishers will prepare program manuals to accompany published programs. Such a manual would be used by teachers, curriculum supervisors, or others who wish information about the nature of the program. This supplement is intended to help program producers prepare an effective manual to accompany a specific instructional program.

There are many agencies, such as large school systems, that may also wish to prepare a program manual as either a substitute for or amplification of the one furnished by the program producer. This supplement, therefore, is addressed to all persons who may have occasion to prepare a program manual for use with an instructional program.

Purpose of a Program Manual

In some respects, the function of a program manual is similar to that of manuals supplied with psychological or educational tests. It should provide information which will help a prospective user make appro-

¹ This report is a supplement to a more extensive document (published in the Spring 1966 issue of *AV Communication Review*), "Recommendations for Reporting the Effectiveness of Programed Instruction Materials" (Revised October 1965).

² A committee representing the American Educational Research Association, the American Psychological Association, and the Department of Audio-
(Footnote continued on p. 244)

Suggestions Concerning Contents of Program Manuals

priate and effective choices of programs. In addition, the manual can provide guidance as to the most effective application of the program. The manual should include the following types of information:

- (1) Content of instructional program.
- (2) Description of intended student population and tryout population for which test data are reported.
- (3) Rationale for tests used to assess instructional program.
- (4) Evidence of effectiveness.
- (5) Practicality (cost, etc.).
- (6) Procedures for introduction and use.

General Features of a Program Manual

The program manual can be prepared so that new data on the program's effectiveness can be readily included in subsequent revisions of the manual. Each edition of a manual should be dated. Manuals which are prepared for preliminary, limited editions of programs, prior to validation by definitive evaluative studies, should be clearly identified to the purchaser as such.

1. Information Concerning Content of Instructional Program

To help the user decide whether the program content is appropriate for his purpose, the program manual should state in detail the minimum objectives of the program, preferably by specifying student behaviors or competencies which its use is intended to achieve. The objectives should be exemplified by test items which are regarded as suitable for measuring the intended outcomes of the program. These test items should be drawn from a test included or described in the manual.

It is helpful and appropriate to state objectives so that they may be compared with the newer as well as more conventional curricula. The manual might well cite comments from reviews in professional journals which indicate how a certain content is related to specific curriculum objectives. An outline of the specific content covered is often desirable.

2. Description of Intended Student Population

The kind of student for whom the program is designed should be specified. Information will probably be included regarding grade level, cultural background, age, and prerequisite skills. Minimum competencies necessary for success in the program might be presented by prerequisite scores on a number of tests. These tests might include scholastic aptitude, reading, and specific measures of competence in the subject-matter field for which the program is designed.

The manual should make clear the nature of the population used in evaluations of the program. Any cultural or sociological differences

visual Instruction (National Education Association). Committee members are: Harry F. Silberman, Evan R. Keislar, Robert Glaser, and Arthur A. Lumsdaine, *Chairman* (AERA); Richard S. Crutchfield, James G. Holland, and Lawrence M. Stolorow (APA); and Jack V. Edling, Edward B. Fry, Wesley C. Meierhenry, and Paul R. Wendt (DAVI). The work of this committee has been supported by the Educational Media Branch, Office of Education, U.S. Department of Health, Education, and Welfare, under Title VII of the National Defense Education Act.

between the intended population and the tryout population should be specified.

3. *Rationale for Tests Used To Assess Instructional Program*

The manual should give a brief description of the rationale for the selection of the criterion test for the program. It should make explicit the relation of the statement of objectives to the test used in measuring the program's effectiveness. Such clarification will help in the preparation of additional tests, if desired, and will aid the program user to interpret existing data.

The manual should also indicate which of the desirable outcomes in the program's content area are not being developed by the program and thus provide a better understanding of what are reasonable expectations for the program. Such an explanation would demonstrate how various classes of test items were related to the kind of behavioral changes that reflect the objectives of the program. It is necessary not only to supply test questions to clarify the program's objectives but also to indicate what kinds of answers are acceptable or nonacceptable.

Where test items used to illustrate an objective are different from those actually used in the test adopted to measure program effectiveness (as reported in the manual), such differences should be explicitly stated. Whenever test items are used for illustrative purposes, the reader should be able to find the tests from which these items were drawn. Sometimes these tests will be reproduced in full in the manual, but if not, references to the appropriate documents should be given so they may be readily located.

4. *Information About the Program's Effectiveness*

Evidence for the effectiveness of a program should be based on carefully conducted studies which show what the use of this particular program has accomplished under specified conditions.

Since the program manual will be designed for the use of teachers and school administrators, it should report the effectiveness of the program in straightforward terms. The reader should not be required to examine and interpret detailed technical data.

The manual should differentiate clearly and explicitly between (1) the opinions of experts or others about the effectiveness of the program and (2) documented evidence on the outcomes actually obtained in practice. The manual should cite the sources of the available evidence to document any claims made about the effectiveness of the program. These sources should include not only those from the producer's own studies but evidence from other carefully conducted studies as well. Many such independent studies, for example, may be carried out by school systems, research projects, or other agencies which have conducted program-assessment studies.

All claims or statements made in the manual about the effectiveness of a program (not directly supported in the manual) should be documented by specific reference to evidence contained in one or more detailed technical reports prepared in keeping with accepted standards of

scientific writing. (Specific recommendations for the preparation of such documents are presented in *Supplement II* to this report.)

While brief summary statements concerning program effectiveness are appropriate in the program manual (as well as in advertising brochures or on the cover or label of a program), such summary statements should always make reference to the technical report on which they were based. The manual should make explicit the correspondence between interpretive statements and the underlying data. The user should be told how and where he can obtain a copy of the technical report even though the manual is a derivative of such a report.

The manual should describe in a straightforward manner the studies undertaken to evaluate the program. The reader should be informed with respect to how the students were selected, the way in which the program was administered, the nature of the evaluative measures, and the results obtained. The description of these empirical studies should be nontechnical but precise. The data may be presented in simple form, such as through the use of graphs.

Any data on the program's effects on students' attitudes should be accompanied by a clear statement that student interest does not necessarily indicate program effectiveness. Where attitudes are measured solely through verbal responses, there should be no implication that other behavioral indices of motivation are also affected. For example, students may say that they liked the program enormously, but none of them may volunteer to receive further instruction.

5. *Information Concerning Practicality of the Program Use*

The user needs to be able to find out from the manual whether or not the program would be feasible for use by him in his local situation. The manual, therefore, can tell the reader whether the programs are reusable, and, if so, how many times they might reasonably be reused. Where supplemental material or equipment is needed, these should be described along with statements of initial and maintenance costs. Information should be available to the reader about supervision requirements for the students taking the program. It is desirable to know the median and range of training time required to present the program effectively. The reports of empirical studies should be complete enough to provide information of this kind. In short, the user should be able to determine within reasonable limits the cost of instructing students by means of the program.

6. *Procedures for Introduction and Use of the Program*

The user should be given a clear picture of the instructional conditions necessary for the success of the program. The manual should present a clear and detailed description of the recommended procedures for introducing students to the program and for administering the instructional and evaluative activities.